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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/467,812	12/20/1999	YUTAKA YOKOYAMA	13273	2853

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GARDEN CITY, NY 11530

EXAMINER

SENGI, BEHROOZ M

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 11/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/467,812

Applicant(s)

YOKOYAMA, YUTAKA

Examiner

Behrooz Senfi

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2613

DETAILED ACTION

Response to Amendment

Response to Arguments

1. Applicant's arguments filed Aug. 21, 2002 have been fully considered but they are not persuasive.
2. Claims 1 – 21 are rejected under 35 U.S.C. 102(b) as being unpatentable over Katata et al. (US 5,631,644), for the same reason as set forth in the previous Office Action (Paper No. 8, dated May 21, 2002).

Response to Remarks:

With respect to the Amended claims 1, 10, 11, 17, 20 and 21, since the amended claims does not add any patentable distinction to the original claims and is only in a different formats and wording and does not raised any new issue that was not considered by the Examiner in previous Office Action, the grounds for rejecting claims 1 – 21 still applies here.

Applicant's argument (Paper No. 9, page 11, lines 13+), alleged that Katata '644 does not disclose "adjusting the quantization step size for each second image unit based on the bit balance of the generated code bit count with respect to the average code bit rate".

Examiner disagrees;

The present invention as a whole is a quantization adjustment based on the generated (original) bit-rate with respect to the average bit-rate and buffer occupation, and Katata '644 reference discloses the same subject matter "adjusting the quantization step based

Art Unit: 2613

on the generated bit-rate and average bit-rate with respect to the buffer occupation" (i.e. fig. 1, col. 1, lines 45+ and col. 2, lines 46 – col. 3, lines 5 and col. 4, lines 1+), examiner fails to see the difference.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 – 21 are rejected under 35 U.S.C. 102(b) as being unpatentable over Katata et al. (US 5,631,644).

Regarding claims 1 and 11, Katata '644 discloses apparatus for variable bit rate Video Coding (i.e. fig. 1) on the basis of a predetermined average bit rate (i.e. fig. 1, units 10 and 11, col. 1, lines 46+), and the predetermined quantization step size (i.e. fig. 1, unit 12), and reference quantization step size for each first image unit in correspondence to the average bit rate from the quantization step size (i.e. fig. 1, unit 11), quantization step size adjusting means (i.e. col. 6, lines 20+).

Regarding claims 2 – 3 and 12 - 13, the prior art Katata '644 discloses an MPEG variable video coding (i.e. fig. 1), which is based on GOP and is a repeatedly process of picture frames and blocks of GOP.

Regarding claims 4 and 14, Katata '644 discloses quantization step size setting means for setting the reference quantization step size for each first image unit computes an image unit complexity defined by the product of the average quantization

Art Unit: 2613

step size over the preceding coded image and generated bit count, and also computes the reference quantization step size for each first image unit from the ratio between the first image unit complexity and the average bit rate (i.e. col. 11, lines 35+).

Regarding claims 5 and 15, Katata '644 discloses quantization step size adjusting means for adjusting the quantization step size (i.e. col. 6, lines 20+).

Regarding claims 6 and 16, Katata '644 discloses virtual buffer sized to the maximum excess from which codes are withdrawn at the average bit rate (i.e. col. 3, lines 45+).

Regarding claims 7 – 8 and 17 - 18, Katata '644 discloses constant bit rate control and bit balance (i.e. fig. 1, controller 19, col. 17, lines 25+ and col. 18, lines 26+) and summation of generated bit count and average quantization step size (i.e. fig. 1, unit 14).

Regarding claims 9 and 19, Katata '644 discloses quantization step size setting means and determines the quantization step size of the first image unit from the average first image unit complexity for the first image unit over the preceding coded image (i.e. cols. 11 and 12, lines 66+).

Regarding claims 10 and 20, Katata '644 discloses quantization step size Adjusting means for adjusting the quantization step size for each second image unit preliminarily sets a threshold for quantization step size (i.e. abstract), and when the excess or shortage of the average bit rate is not excessive, the reference quantization step size set for each first image unit is compared with the threshold and providing the quantization step without any adjustment when the reference quantization step size is

Art Unit: 2613

not exceeding the threshold quantization step size, and adjust (i.e. col. 6, lines 1+ and lines 44+ and col. 7, lines 34+).

Regarding claim 21, the limitations claimed are substantially similar to claim 11, except the holding a constant coded image quality level over a plurality of groups of picture (i.e. col. 4, lines 45+ and col. 18, lines 26+).

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Behrooz Senfi** whose telephone number is **(703)305-0132**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Chris Kelley** can be reached on **(703)305-4856**.

Art Unit: 2613

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relative to the status of the application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

B. S. B. S.

10/28/2002


CHRIS KELLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600